



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/713,228	11/13/2003	Juha K. Salmela	007961-008000US	1193
20350	7590	01/20/2006	EXAMINER	
TOWNSEND AND TOWNSEND AND CREW, LLP			SORKIN, DAVID L	
TWO EMBARCADERO CENTER			ART UNIT	PAPER NUMBER
EIGHTH FLOOR				
SAN FRANCISCO, CA 94111-3834			1723	

DATE MAILED: 01/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/713,228	SALMELA ET AL.
	Examiner	Art Unit
	David L. Sorkin	1723

— The MAILING DATE of this communication appears on the cover sheet with the correspondence address —

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 02 November 2005.

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1 and 5-23 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 1 and 5-23 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some \* c) None of:

- Certified copies of the priority documents have been received.
- Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
- Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) Notice of References Cited (PTO-892) 4) Interview Summary (PTO-413)  
2) Notice of Draftsperson's Patent Drawing Review (PTO-948) Paper No(s)/Mail Date. \_\_\_\_\_.  
3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) 5) Notice of Informal Patent Application (PTO-152)  
Paper No(s)/Mail Date. \_\_\_\_\_ 6) Other: \_\_\_\_\_.

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 and 5-23 are rejected under 35 U.S.C. 102(b) as being anticipated by Gilmore (US 4,222,671). Regarding claim 1, Gilmore ('671) discloses a mixing apparatus for mixing flowable material, the mixing apparatus comprising a first body (40) having a first mating surface (the bottom surface as seen in Fig. 4) and a plurality of first cavities (46,48,50), the plurality of first cavities being arranged along a first path to provide variations in depth measured from the first mating surface; and a second body (42) having a second mating surface (44) configured to mate with the first mating surface of the first body, the second body including a plurality of second cavities (45, 47, 49) formed on the second mating surface, the plurality of cavities being arranged along a second path to provide a variation in depth measured from the second mating surface; wherein the first mating surface of the first body is mated with the second mating surface of the second body to align the first path with the second path, the first path cavities fluidically communicating with the second cavities to form on continuous internal flow path from an inlet (52 in 40) through the first cavities and second cavities to an outlet (52 in 42), the internal flow path having multiple depth turns to direct flow between the first body and the second body formed by the depth variations in the first cavities of

the first body and the second cavities in the second body (see Fig. 4 and col. 6 line 61 to col. 8 line 29). As seen in Fig. 4, the first cavities (46, 48, 50) overlap in an arching fashion staggered regions of zero depth between the second cavities, and visa versa. For an overlapping arrangement other than the arching type shown in Fig. 4, see Fig. 26. Regarding claim 5, the multiple depth turns are spaced by substantially regular intervals (see Fig. 4). Regarding claim 6, the first mating surface and the second mating surface are generally planar (see Fig. 4). Regarding claim 7, the plurality of first cavities comprise at least one first cavity having a surface turn on the first mating surface (see Fig. 4). Regarding claim 8, the turn is about 90 degrees (see col. 7, line 52). Regarding claim 9, the first mating surface is bonded to the second mating surface (see col. 7, lines 13-18). Regarding claim 10, the surfaces of the internal flow path are substantially free of cracks and crevices visible to human eye (see Fig. 4). Regarding claim 11, Gilmore ('671) discloses a mixing apparatus for mixing flowable material, the mixing apparatus comprising a first shell (40) having a first mating surface (the bottom surface as seen in Fig. 4) and a plurality of first cavities (46,48,50), the plurality of first cavities being arranged along a first path to provide variations in depth measured from the first mating surface; and a second shell (42) having a second mating surface (44) configured to mate with the first mating surface of the first shell, the second shell including a plurality of second cavities (45, 47, 49) formed on the second mating surface, the plurality of cavities being arranged along a second path to provide a variation in depth measured from the second mating surface; wherein the first mating surface of the first shell is mated with the second mating surface of the second shell to

align the first path with the second path, the first path cavities fluidically communicating with the second cavities to form one continuous internal flow path from an inlet (52 in 40) through the first cavities and second cavities to an outlet (52 in 42), the first cavities being spaced from each other along the first path by regions of shallow depth from the first mating surface (see Fig. 4), the second cavities being spaced from each other along the second path by regions of shallow depth from the second mating surface (see Fig. 4), the first regions of shallow depth of the first mating surface and the second regions of shallow depth being staggered along the internal flow path (see Fig. 4 and col. 6 line 61 to col. 8 line 29). As seen in Fig. 4, the first cavities (46, 48, 50) overlap in an arching fashion staggered regions of shallow (zero) depth between the second cavities, and visa versa. For an overlapping arrangement other than the arching type shown in Fig. 4, see Fig. 26. Regarding claim 12, the plurality of first cavities comprise at least one first cavity having a surface turn on the first mating surface (see Fig. 4). Regarding claim 13, the first mating surface and the second mating surface are generally planar (see Fig. 4). Regarding claim 14, the first regions of shallow depth and the second regions of shallow depth comprise regions of zero depth (see Fig. 4). Regarding claim 15, the first regions of shallow depth of the first mating surface and the second regions of shallow depth being staggered along the internal path at substantially regular interval (see Fig. 4). Regarding claim 16, Gilmore (US 4,222,671) discloses a method of making a mixing apparatus for mixing flowable material, the method comprising providing a first body (40) having a first mating surface and a plurality of first cavities formed on the first mating surface, the plurality of first cavities (46, 48, 50) being

arranged along a first path to provide a variation in depth measured from the first mating surface; providing a second body (42) having a second mating surface configured to mate with the first mating surface of the first body, the second body including a plurality of second cavities (45, 47, 49) formed on the second mating surface, the plurality of second cavities being arranged along a second path to provide a variation in depth measured from the second mating surface (see Fig. 4); and mating the first mating surface of the first body with the second mating surface of the second body to align the first path with the second path, the first cavities fluidically communicating with the second cavities to form an internal flow path from an inlet (52 in 40) through the first cavities and second cavities to an outlet (52 in 40), the internal flow path having multiple depth turns to direct flow between the first body and the second body formed by the depth variations in the first cavities of the first body and the second cavities in the second body (see Fig. 4 and col. 6 line 61 to col. 8 line 29). As seen in Fig. 4, the first cavities (46, 48, 50) overlap in an arching fashion staggered regions of zero depth between the second cavities, and visa versa. For an overlapping arrangement other than the arching type shown in Fig. 4, see Fig. 26. Regarding claim 17, the mating comprises bonding the first mating surface with the second mating surface (see col. 7, lines 13-18). Regarding claim 18, the multiple depth turns are spaced by substantially regular intervals (see Fig. 4). Regarding claim 19, the first body and second body are formed by molding (see col. 11, lines 62-63). Regarding claim 20, the plurality of first cavities comprise at least one first cavity having a surface turn on the first mating surface (see

Fig. 4). Regarding claims 21 and 23, the surface turn is about 90 degrees (see Figs. 2-4). Regarding claim 22, the mating surfaces are generally planar (see Fig. 4).

***Response to Arguments***

3. While the overarching type of overlap shown in Fig. 4 of Gilmore ('671) may be different than what is shown in applicant's drawing, it is still within the scope of "overlap" recited in the claims. Anyway, Fig. 26 of Gilmore ('671) show overlap which is of the same style as applicant's drawings.
4. That Gilmore ('671) discloses an internal flow path that branches, does not negate the disclosure of one continuous path.

***Conclusion***

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David L. Sorkin whose telephone number is 571-272-1148. The examiner can normally be reached on 9:00 -5:30 Mon.-Fri..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda L. Walker can be reached on 571-272-1151. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



David L. Sorkin  
Primary Examiner  
Art Unit 1723

DLS